

L 15134-65

EWP(d)

IJP(c)/SSD/AFWL

ACCESSION: AP4045323

2/0055/64/014/009/0667/0687<sup>7</sup>

AUTHOR: Lanik, J.

TITLE: The singularities of Jost functions and potentials <sup>10</sup>SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 9, 1964,  
667-677TOPIC TAGS: inverse problem, potential scattering, Noyes Wong  
equation, Jost function

ABSTRACT: A solution of the inverse problem of the theory of potential scattering is presented. This article is concerned with extending the considerations used in previous papers, M. Petras (Czech. J. Phys., v. 12, 1962, 87), M. Petras (Mat. - fyz. cas. SAV, v. 12, 1962, 136), to the case of an arbitrary partial wave ( $l \geq 1$ ). The solution is presented with definite simplifying assumptions which were imposed by the increasing complication of calculations with increases in the quantum number  $l$ . Some analytical properties of the Jost functions were postulated (singularities of the Jost functions are simply related to singularities of the

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Z/0055/64/014/009/0667/2e77

scattering amplitude in the case of unbound states) and their corresponding potentials were studied. It was found that the inverse problem leads in the case of the simplest singularities (poles on the positive side of the imaginary axis of the complex plane  $k$  and poles at the point  $k=0$  to the order  $\lambda$ ) to the solution of a system of nonlinear second-order differential equations which, by applying simplifying assumptions, can be rewritten as an inhomogeneous system of linear algebraic equations and solved. Results for an arbitrary angular momentum  $\lambda > 0$  were obtained by extending the basic form of the Jost solution (given in the first paper cited here) by terms which correspond to poles of the first, second, ...,  $\lambda$ -th order at the point  $k=0$ . In addition, not only the desired potentials were obtained, but also the corresponding regular solution  $v_2(k, r)$  which may be expressed by the Jost solution  $f_2(k, r)$ . In the final section of the paper it was proved that if the potential for  $r \rightarrow \infty$  decreases as a rational function ( $\sim r^{-s}$ ), where for  $r \rightarrow \infty$  the exponential terms and terms  $\sim r^{-s}$  ( $s > 3$ ) may be omitted and the expression  $\lambda(\lambda-1)r^{-3}$  may be interpreted as the centrifugal potential corresponding to the appropriate angular momentum  $\lambda$ , then the generalized Noyes-Wong equation is homogeneous. Likewise, it was

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3

proved that if the potential for  $r \rightarrow \infty$  decreases exponentially, then the appropriate Noyes-Wong equation is not homogeneous. "The author thanks Dr. M. Petras and M. Blinzek M.A. for valuable advice." Orig. art. has 40 equations.

ASSOCIATION: Institute of Physics, Slovak Academy of Sciences,  
Bratislava

SUBMITTED: 13Feb64

ENCL: 00

SUB CODE: NP

NO REF Sov: 000 OTHER: 003

3/3

Card

S/035/62/000/010/127/128  
A001/A101

AUTHOR: Láník, Jíří

TITLE: Vertical range finder rod

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 46,  
abstract 10G244 P (Czechosl. patent, no. 99279, April 15, 1961)

TEXT: The rod is intended for direct measurements of horizontal distances by means of a cross-wire range finder. This is achieved in the following way. Attachment 5 is fastened to rod 8 (Figure 1); the lower part of the attachment represents curve 10 formed by lines tangent to it, passing from tacheometrical wire 4 at different inclination angles of the telescope sighting axis in the process of measuring distances whose horizontal projections 2 are equal. In this case, the line passing from the second tacheometrical wire 6 crosses scale 7 of the rod at the same point 9; due to this circumstance, reading on the rod is equal to L independent of the angle of sighting axis inclination. In so far as parameters of curve 10 are functions of distance, a separate attachment should exist for every distance being measured. The rod proposed meets this require-

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Vertical range finder rod

S/035/62/000/010/127/128  
A001/A101

ment as follows: decimeter divisions 17, 27, ..., 57 (Figure 2) are marked on the rod, and decimeter 67 is subdivided into centimeters. At the end of each decimeter, an attachment (15, 25, ..., 65) is fastened to the rod. To measure a horizontal distance, tacheometrical wire 4 is aimed at the curvilinear part of one of the attachment in such a way, that the reading could be made by the other wire 6 within decimeter 67.

N. Modrinskiy

[Abstracter's note: Complete translation]

Card 2/32

LANIK, V.; KINDERNAY, S.; L. SPISSAK, L.; URBANKOVA, H.; LANIKOVA, V.

Viewpoints on the syndrome of hip joint paralysis and its treatment.  
Bratisl. lek. listy 45 no.2 :92-96 31 Ja '65

1. Detsky rehabilitacny ustav pro Detskej fakultnej nemocnici v Bratislave (veduci MUDr. V. Lanik); Ortopedicka klinika lekarske fakulty Univerzity Komenskeho v Bratislave (veduci akademik J. Cervenansky) a Detsky ustav pre telesne chytrnych v Bratislave, Liecelme oddelenie (veduci primar MUDr. L. Spissak).

LANIK, Milan

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: Doctor of Veterinary Medicine

Affiliation: Blansko

Source: Prague, Veterinarstvi, Vol XI, No 6, 1961, pages 229-231.

Data: "Seventh Congress of ROH /Revolucni odborove hnuti; Revolutionary Trade-Union Movement/, Trade-Union Association of Employees in Agriculture and Forestry (Odborovy svaz zamestnancu zemedelstvi a lesniho hospodarstvi)."

GPO 981643

KINDERNAY, S.; SPISSAK, L. ; LANIK, V.; LANIKOVA, V.

Experiences with the surgical treatment of paralytic hip luxation. 'ratisl. lek. listy 45 no.2 81-86 31 Ja '65

1. Ortopedicka klinika lekarske fakulty Univerzity Komenskeho v Bratislave (ceduci - akademik J. Cervenansky); Detsky ustav pre telesne chybnych v Bratislave (veduci ~ primar MUDr. L. Spissak); a Detsky rahabilitacny ustav pri Detskej fakultnej nemocnici v Bratislave (veduci Dr. V. Lanik).

IANIK, V.

New principles in final treatment of poliomyelitis. Acta chir. orthop.  
traum oech. 19 no. 9:327-329 1952. (CLML 23:5)

1. Of the Orthopedic Clinic of Slovak University and of the Institute  
for the Treatment of Poliomyelitis, Bratislava.

LANIK, V., Bratislava, ul. Narodneho povstania 6; LANIKOVÁ, V., Bratislava,  
ul. Narodneho povstania 6

Principles of therapy of poliomyelitis. Lek. obzor 3 no.6:334-345  
1954.  
(POLIOMYELITIS, therapy)

CERVENANSKY , J.; SKROVINA,B.; LANIK, V.; LMIKOVA, V.

Capsular arthroplasty of the hip joint. I. Clinical part.  
Bratisl. lek. listy 44 no.9:545-557 '64

1. Ortopedicka klinika Lekarskej fakulty Univerzity Komenskeho v Bratislave; veduci: prof. MUDr. J. Cervenansky.

SKROVINA, B.; CERVENANSKY, J.; LANK, V.; L'ANIKOVA, V.

Capsular arthroplasty of the hip joint. II. Morphological findings on the normal and dysplastic acetabulum. Bratisl. lek. listy 1 no.11&6:1-6,9 '64

Capsular arthroplasty of the hip joint. III. Rehabilitation in residual states after capsular arthroplasty.

1. Ortopedicka klinika Lek. fak. Univerzity Komenskeho v Bratislavie; veduci prof. dr. J.Cervenansky.

LAWRENCE R. H.

129 - 2 - 8/10

AUTHOR: Assonov, A.D., Candidate of Technical Sciences,  
Shepelyakovskiy, K.Z. and Lanikh, P.A. (Moscow)

TITLE: Mechanical Properties of Steel Subjected to High Speed Cementation  
During High Frequency Heating. (Mekhanicheskiye svoystva stali,  
Podvergnutoy skorostnoy tsementatsii pri nagreve T.B.C.).

PERIODICAL: Metallovedenie i obrabotka metallov, 1957, No. 2, pp 46-48  
(U.S.S.R.)

ABSTRACT: The influence of high cementation temperatures on the mechanical properties of steel were investigated between 1938 and 1943 by S.S. Stroev who carried out cementation of components in a solid carburizing agent at 1100-1140°C for a period of ten hours. Some of the results obtained by Stroev are reviewed (Tables 1 and 2, p. 46). The authors cite data obtained experimentally as a result of high temperature gas cementation, using high frequency heating, for specimens and gears made from 18~~X~~17 steel (composition: < 0.16-0.24% C, 0.17-0.37% Si, 0.80-1.10% Mn, 1.00-1.30% Cr, 0.40% Ni, 0.08-0.15% Ti) after hardening from 870°C and tempering at 200°C; depending on the quality of the melt the values varying

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129 - 2 - 8/10

## TITLE:

Mechanical Properties of Steel Subjected to High Speed Cementation During High Frequency Heating. (Mechanicheskiye svoystva stali, Pdvergnutoy skorostnoy tsementatsii pri nagreve T.B.Z.).

within the limits given in Table 4, p. 47. Comparison of these data with data obtained at sub-zero temperature (given in Table 5, p. 47) shows that high temperature heating does not have an adverse effect on the strength properties of steel. The influence of high temperature heating on the strength of steel was also investigated for specimens made from four other types of steel; the resulting mechanical properties are given in Table 6. The data given in Table 7 were obtained for steel heated in vacuum in the Vacuum Metallography Laboratory of the Engineering Research Institute Ac.Sc., under the direction of M.G. Lozinskiy. The data given in Table 8 were obtained after making apparent the grains by the oxidation method. The presence of Ti and Zr carbides in the steel impedes grain growth. Therefore, steel containing such carbides can be heated during carburization to up to 1200°C which permits a considerable shortening of the carburization process. Apparently over-heating Cr-Mn-Ti steel specimens with a naturally fine grain during case hardening does not influence the fatigue limit of this steel.

Card 2/3

129 - 2 - 8/10

TITLE: Mechanical Properties of Steel Subjected to High Speed Cementation  
During High Frequency Heating. (Mekhanicheskiye svoystva stali,  
podvergnutoy skrostonoy tsementatsii pri nagreve T.B.Z.).

The text contains 9 tables. There are no references.

ASSOCIATION: Moscow Automobile Plant imeni Likhacheva.

PRESENTED BY: ---

SUBMITTED: ---

AVAILABLE: Library of Congress.

Card 3/3

LANIKOVA, J. M.

Category: Czechoslovakia / Physical Chemistry  
Thermodynamics. Thermochemistry. Equilibrium. Physico-  
chemical Analysis. Phase transitions.

B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29960

Author : Machacek Z., Lanikova J. Makarek

Inst : not given

Title : Solubility of Vinyl Chloride in Organic Solvents

Orig Pub: Chem. listy, 1954, 48, No 2, 276-279

Abstract: Determination of the solubility of  $\text{CH}_2 = \text{CHCl}$  in tetrahydrofuran,  
 $\text{HCON}(\text{CH}_3)_2$ ,  $\text{CH}_3\text{CHCl}_2$  and methyl cyclohexanone, by means of a special  
apparatus and in accordance with the method of a liquid film passing  
through a gas. The results obtained at 20, 30, 40, 50° are tabulated.

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-81-

LANIKOVA, J-

3

✓ Preparation of dilute polyvinyl chloride solutions in cyclohexanone for viscometry. Z. Menclík and J. Laníková (Výzkumné ústav využití plastických hmot, Brno, Czech.). Chem. Listy 49, 1393-400 (1955). — The process of dissolving polyvinyl chloride in cyclohexanone is not completed on disappearance of the solid phase; the last structural aggregates must be destroyed by heating the soln. Reproducible results were obtained by heating for 30 min. at 80°. The viscosity of samples prep'd. in this manner was const. over a period of 20 days, whereas the viscosity of the solns. prep'd. at room temp. decreased slowly to reach a value higher than that obtained with the samples prep'd. by dissolving at 80°. M. Hudlický.

2 May

MHD

LAVIKOVA, J.

✓ 1887. Preparation of dilute polyvinyl chloride  
solutions in cyclohexanone for viscometry. Z.  
Mencik and J. Lavikova. Coll. Czech. Chem.  
Comm., 1958, 21, No. 1, 257-9; Rec. Curr. Lit.  
Paint, Col. Varn., 1957, 30, 99. Cf. Ridd. Abs.;  
1956, ate. 2347. An English translation now  
appears. *3S2H2134651*

3  
item  
2 may

RM MK

LANIKOVA, JIRINA

CZECHOSLOVAKIA/Chemistry of High Molecular Substances.

I

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 23719

Author : Zdenek Mencik, Jirina Lanikova

Inst :

Title : Degradation of Vinylidene Chloride-Vinyl Chloride Copolymer in Cyclohexanone Solution.

Orig Pub : Chem. listy, 1957, 51, No 2, 229-232

Abstract : The degradation of vinylidene chloride-vinyl chloride copolymer in cyclohexanone solution is caused by peroxide substances forming spontaneously, if cyclohexane was aging in air. It was shown by measurements of viscosity that an addition of benzoyl peroxide accelerated the degradation, and additions of benzoquinone inhibit it.

The inhibiting efficiency decreases in the series benzoquinone, picric acid, hydroquinone, pyrocatechin, resorcin.

Card 1/1

LANIKOVA, J.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928520017-7

Distr: 4E2c(j)

Kinetics of the crystallization process of low-pressure polyethylene.] J. Majer, J. Belusa, and L. Lanikova (Macro-molecular Research Institute, Brno, Czechoslovakia). *Kunststoff-Kundschau* 7, 39-44(1960).—On analyzing the crystall. isothermal curve of low-pressure polyethylene according to the procedure of Avrami (*CA* 35, 3137\*) and Morgan (*CA* 48, 13270b), the authors found that the crystn. is dependent on 2 competitive processes: formation of the nuclei and growth of the spherulites. The melting conditions were 3 min. at 180° and the crystn. temperature range 120-7.6°. The value of the velocity constant  $k_0$  changes in the range order of  $1 \times 10^{-3}$  to  $1 \times 10^{-4}$ . At temps. below 120° the primary crystn. cannot be followed any more by the dilatometric method. The comparison of several theoretical relations has shown the equivalence of vol. and wt. portions of the cryst. phase; the Mandelkern equation, however, gives lower values for  $k_0$ . According to the Kantorowitz criterion, in low-pressure polyethylene an apparent induction period is probably involved and must not be excluded in computing the  $k_0$  and  $n$  values. The activation energy computed from the temp. dependence of time parameter is of the same order, however higher than in high-pressure polyethylene. Only the right-side portion of the curve from the max. of total crystn. velocity was studied.

L. A. Helwick

5  
1-July (1/3)  
1

LANIKOVA, J.

## PHASE I BOOK EXPLOITATION

Sov/4584

International symposium on macromolecular chemistry. Moscow, 1960.

Antsuumochnyj S'ezd po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960. Eti doklady i avtoreferaty. Sektsiya III. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960. Papers and Summaries) Section III. [Moscow, Izd-vo AN SSSR, 1960] 469 p., 55,000 copies printed.

Tech. Ed.: P. S. Kuslin.

Sponsoring Agency: The International Union of Pure and Applied Chemistry. Commission on Macromolecular Chemistry.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high molecular compounds.

COVERAGE: This is Section III of a multivolume work containing papers on macromolecular chemistry. The articles in general deal with the kinetics of polymerization reactions, the synthesis of special-purpose polymers, e.g., ion exchange resins, semiconductor materials, etc., methods of carrying polymerization reactions, properties and chemical interaction of high molecular materials, and the effects of various factors on polymerization and the degradation of high molecular compounds. No personalities are mentioned. References given follow the articles.

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|--|-----|
| Turley, V. M., A. N. Petrenchikov, and S. S. Medvedev (USSR). The Effect of Boric Acid and Formic Acid on the Oxidation of Hydrocarbons and Hydrocarbon Polymers ... 364                               |     |
| Potem, Z. V. and D. M. Tanauskas (USSR). Study of the Effect of Some Organic and Inorganic Compounds on the Thermal Degradation of Polyvinyl Chloride ... 372  |     |
| Machetelle, O., E. Sittler, and P. Černel (Czechoslovakia). Degradation of Poly-( $\gamma$ -Caprolactam) as a Result of Exchange Reaction Between Amide Bonds ... 380                                  |     |
| Kudrja, M., I. Ishinov, and M. Jasinsk (Czechoslovakia). Neutralization of Residual Catalyst in Polydimethylsiloxane; Effect of Thermal Neutralization on the Thermal Stability of the Polymer ... 388 |     |
| Domorád, J., O. Mlyník, and J. Šťáhlík (Czechoslovakia). Thermochemical Degradation of Polymers. Study of Degradation Reactions for Different Types of Linear Polyesters ... 405                       |     |
| Martens, M. B., B. M. Korotkovskaya, L. I. Dolbenko, A. S. Strikhanova, L. Levantovskaya, and M. S. Butin (USSR). On the Degradation and Stabilization of Some Polymeric Materials ... 414             |     |
| Angert, I. G. and A. S. Kurzimskiy (USSR). Investigation of the Efficiency of Inhibitors of Rubber Oxidation at Various Temperatures ... 423   |     |
| Khazanov, A. N. and Ying Wen-Kuang (USSR). Mechanism of the Protective Action of Benzene Rings During the Radioysis of Polystyrene ... 433   |     |
| Zilman, A. A. and K. A. Andrianov (USSR). On the Hydrolytic Stability of Side Groups in Polymers With Inorganic Chains or Molecules ... 440  | 25  |
| Berlin, A. A., Ye. A. Penskay, and G. I. Volkova (USSR). Mechanicochemical Transformations and Block Copolymerization During the Freezing of Starch Solutions ... 446                                  |     |
| Usanov, Yu. N., B. I. Arkhodzhuyev, and U. Zhazayev (USSR). Modification of the Properties of Cellulose by Drafting ... 334  | 23  |
|  | 344 |

S/081/62/000/021/056/069  
B160/B186

AUTHORS: Láníková, Jiřina, Kučera, Miloslav, Jelínek, Milan

TITLE: Method of stabilizing polysiloxane

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 476-477  
abstract 21P263 (Czech. patent 99408, Apr. 15, 1961)

TEXT: A method is patented for increasing the thermal stability of polysiloxanes by using additives (0.01-5% by weight) - powdered amphoteric hydroxides, particularly those that have been partially dehydrated, e. g.  $\text{Al}_2\text{O}(\text{OH})_3$  or  $\text{Fe}_2\text{O}(\text{OH})_3$  (empirical formulas). Polydimethyl siloxane stabilized with  $\text{Al}(\text{OH})_3$  shows no degradation after 48 hours of heating at  $270^{\circ}\text{C}$  in air. [Abstracter's note: Complete translation.]

Card 1/1

LANIK, V., Bratislava, ul. Narodneho povstania 6; LANIKOVA, V., Bratislava,  
ul. Narodneho povstania 6

Principles of therapy of poliomyelitis. Lek. obzor 3 no.6:334-345  
1954.

(POLIOMYELITIS, therapy)

KINDERNAY, S.; LANIKOVA, V.; DUDA, E.

Experiences with the surgical treatment of habitual dislocation  
of the shoulder joint. Acta chir. orthop traum. Cech. 32 no.1:  
20-23 F'65.

1.Ortopedicka klinika Lekarske fakulty University Komenskeho  
v Bratislave (prednosta: akademik Slovenskej akademie vied  
J. Cervenansky) a Chirurgicke oddelenie Vojenskej nemocnice  
v Bratislave (veduci: MUDr. Z. Rozhold).

## PAGE 1 BOOK INFORMATION

Sov/1983

International symposium on macromolecular chemistry. Moscow, 1960.  
 Mezhdunarodnyi simpozium po makromolekulyarnoy khimii. SSSR, Moscow, 14-18 iyunya 1960 g. doklad 1 stranstvenny. Sessiya II. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18; Paper 1 of Reports and Summaries) Section II. (Moscow, Izd. v AN SSSR, 1960) 559 p., 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T.A. Frusikova.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

COVERAGE: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly the kinetics of various polymerization reactions initiated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering interdiffusion. There are summaries in English, French and Russian. No particularities are mentioned. References follow each article.

Magazin' chern. i tekhn. zashchity (USSR). Inhibition of Polymerization by Aromatic Compounds 22

Tidke, P., I. Konda, and M. Azori (Hungary). Kinetics of the Initiatives

of Polymerization of Styrene by Nitro Compounds 31

Razumov, G.M., L.N. Temkin, V.R. Libatova, and V.S. Efimov (USSR). Radical Decomposition Reactions of Some Peroxides and Peroxates 53

Leibnitsky-Abe, and Ota. Flenderer (USSR). On the Relative Activity of

Benzofluoro-*n*-Butadiene in Polymerization and Copolymerization Reactions With Other Diene Compounds 62

Farkov, L.M., and S.Ye. Freival's (USSR). Interchain Exchange Reactions

In the Process of Radical Polymerization 72

Narita, D., M. Matsumi, S. Kuroki, and Y.P. Li (Hungary). Kinetic Study of Radical Polymerization of Vinyl Monomers in the Presence of SiCl<sub>4</sub> 103

Perecik, M., and B. Grodzanska (Poland). A Method of Measuring the Polymerization Rate at a High Degree of Conversion 120

Erlman, E., and K.F. Madsen (USSR). Study of the Mechanism of Emulsion Polymerization 127

Antochek, A., and M. Blodick (Czechoslovakia). The Heat of Reaction At a

Mean of Studying the Mechanism of the Emulsion Polymerization of Styrene

and Chloroprene 135

Hrabák, F., and Ya. Zabroni (Czechoslovakia). Emulsion Polymerization of Chloroform 139

Purba, J., and O. Měříkovič (Czechoslovakia). Change of Potential During Polymerization in Carbonyl-Reduction Viii. Kresulina (USSR). On the

Mechanism of the Polymerization of Methyl Methacrylate by

Alkalis. M. Matjeljev, L. Lajkova, and K. Vesely (Czechoslovakia). Chain Degradation During the Anionic Polymerization of Octaethylstearalactone 203

The Formation of Stable Complexes at Active Centers 232

Macháček, Z., F. Mellich, and L. Ptáček (Czechoslovakia). Kinetics of the

Polymerization of Formic Acid 253

Vesely, E. (Czechoslovakia). On the Mechanism of Ionic Polymerization 262

Zálesáková, and Al. Ptáček (Czechoslovakia). On the Role of Ion-polar

Compounds in the Cationic Polymerization of Isobutylene 272

45

SKROVINA, B.; CERVENANSKY, J.; LALIK, V.; L'ANIKOVA, V.

Capsular arthroplasty of the hip joint. II. Morphological findings on the normal and dysplastic acetabulum. Bratisl. lek. listy 1 no.118671-679 '64

Capsular arthroplasty of the hip joint. III. Rehabilitation in residual states after capsular arthroplasty.

1. Ortopedicka klinika Lek. fak. University Komenskeho v Bratislavie; veduci prof. dr. J.Cervenansky.

CERVENANSKY , J.; SKROVINA,B.; LANIK, V.; LANIKOVA, V.

Capsular arthroplasty of the hip joint. I. Clinical part.  
Bratisl. lek. listy 44 no.9:545-557 '64

1. Ortopedicka klinika Lekarskej fakulty Univerzity Komenskeho v Bratislave; veduci: prof. MUDr. J. Cervenansky.

KINDERNAY, S.; SPISSAK, L. ; LANIK, V.; LANIKOVA, V.

Experiences with the surgical treatment of paralytic hip luxation.  
Pratisl. lek. listy 45 no. 2281-36 31 Ja '65

1. Ortopedicka klinika lekarske fakulty Univerzity Komenskeho  
v Bratislave (veduci - akademik J. Cervenansky); Detsky ustar  
pre telesne chybnych v Bratislave (veduci - primar MUDr.  
L. Spissak); a Detsky rehabilitacny ustar pri Detskej fakultnej  
nemocnici v Bratislave (veduci Dr. V. Lanik).

LANIK, V.; KINDERNAY, S.; L. SPISSAK, L.; URBANKOVA, H.; LANIKOVA, V.

Viewpoints on the syndrome of hip joint paralysis and its treatment.  
Bratisl. lek. listy 45 no.2 :92-96 31 Ja '65

1. Detsky rehabilitacny ustav pro Detskej fakultnej nemocnici v Bratislave (veduci MUDr. V. Lanik); Ortopedicka klinika lekarske fakulty Univerzity Komenskeho v Bratislave (veduci akademik J. Cervenansky) a Detsky ustav pre telesne chybnych v Bratislave, Liecelme oddelenie (veduci primar MUDr. L. Spissak).

USSR/Diseases of Farm Animals. Diseases Caused by Helminths.

R

Abs Jour: Ref Zhur-Biol, No 15, 1958, 69486.

Author : Innolin, V.F.  
Inst : Leningrad Scientific Research Veterinary Institute.  
Title : On the Infection of Calves with Dictyocaulosis  
[ Lungworm Infection ]..on Pastures Infested in  
Autumn.

Orig Pub: Byul. nauchno-tekhn. inform. Leningr. n.-i. vet.  
in-ta, 1957, vyp. 3, 19-21.

Abstract: The article shows that under conditions prevailing  
in the Kaliningrad Oblast', the pastures infested  
in autumn constitute a source of vernal infection  
of calves with dictyocaulosis. The calves which  
grazed on such pasture contracted dictyocaulosis

Card : 1/2

MEL'NIKOV, A.A.; LANIMAMOV, O.D.; ASTROV, O.V., otv.red.; SEMIKINA, T.F., red.izd-vs; ANOKHINA, M.G., tekhn.red.

[Food industry of Kirghizistan; branches: flour and grain milling, bread-baking, confectionery, macaroni, sugar, and oil extraction]. Pishchevaya promyshlennost' Kirgizii; otdasli: mukomol'no-krupianskaia, khlebopekarnaia, konditerskais, makaronnaia, sakharinaia i masloboinskaia. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR, 1960. 145 p. (MIRA 13:12)  
(Kirghizistan--Food industry)

LANIN, A.; AREF'YEV, G.

Production of beryllium in the capitalist countries. Atom.  
energ. 9 no.1:70- '71 Jl '60. (MIRA 13:7)  
(Beryllium)

ZEFIROV, A.P.; LANIN, A.A.

Production and use of beryllium. Met. i metalloved. chist. met.  
no. 2:319-333 '60. (MIRA 13:12)  
(Beryllium)

BULDYREV, V.S.; LANIN, A.I. (Leningrad)

"On the analysis of the interferential wave field near the surface of an elastic sphere"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

ACC NR: AT7006688

SOURCE CODE: UR/2517/66/092/000/0147/0155

AUTHORS: Lanin, A. I.; Buldyrev, V. S.

ORG: none

TITLE: On a study of the reflected field in the problem of diffraction by a cylinder with a relative refractive index  $n < 1$

SOURCE: AN SSSR. Matematicheskiy institut. Trudy, v. 92, 1966. Krayevyye zadachi matematicheskoy fiziki (Boundary value problems of mathematical physics), no. 4, 147-155

TOPIC TAGS: cylindric wave, shock wave diffraction, Bessel function, analytic function, Green function, Reynolds number

ABSTRACT: The diffraction of a cylindrical wave by a transparent cylinder with  $r \leq a$  and with a relative refractive index  $n < 1$  is examined. The formation of the head wave and an accurate solution of the diffraction problem were described earlier by V. S. Buldyrev (Issledovaniye funktsii Grina v zadache difraktsii na prozrachnon tsilindre s otnositel'nym pokazatelem prelomleniya, men'shim yedinitcy. Chislennyye metody resheniya differentsial'nykh i integral'nykh uravneniy i kvadraturnyye formuly. Izd. Nauka, M., 1964). The wave field  $U(r, \vartheta)$  for two regions A and B ( $0 \leq \vartheta \leq \vartheta_0$  and  $\vartheta_0 < \vartheta \leq \pi$ , respectively):

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ACC NR: AT7006688

$$U = S_0 + S_1 + S_e + \sum_{l=1}^{\infty} \left\{ \sum_{m=0}^{N-1} (s_{lm}^+ + s_{lm}^-) + S_{lN}^+ + S_{lN}^- \right\}$$

$$U = S + S_e + \sum_{m=0}^{N-1} s_{0m}^+ + S_{0N}^+ + \sum_{l=1}^{\infty} \left\{ \sum_{m=0}^{N-1} (s_{lm}^+ + s_{lm}^-) + S_{lN}^+ + S_{lN}^- \right\}.$$

The incident and reflected wave in region A is examined, and so are the incident reflected wave and the slip waves in region B. Orig. art. has: 27 formulas and 5 diagrams.

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 002

Card 2/2

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928520017-7

LANIN, A.L.

Equivalent X-circuits for symmetric quadripoles. Radiotekhnika 8  
no.1:73-74 Ja-F '53. (MIRA 11:6)  
(Radio circuits)

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928520017-7"

LANIN, A.N.

Arterial pressure changes in rabbits in relation to radiation  
doses. Med.rad. 6 no.4:24-29 '61. (MIRA 14:12)  
(BLOOD PRESSURE) (RADIATION-PHYSIOLOGICAL EFFECT)

L 18082-63  
ACCESSION NR: AP3005689

EWT(1)/EWT(m)/EDS/ES(j)

AMD/AFFTC/ASD AR/K  
S/0241/63/008/008/0042/0048

AUTHOR: Lanin, A. N.

TITLE: Relation between arterial pressure changes and the state of certain regulatory mechanisms at early periods following ionizing radiation

SOURCE: Meditsinskaya radiologiya, v. 8, no. 8, 1963, 42-48

TOPIC TAGS: arterial pressure, change, X-irradiation, dibenamine, carotid artery, vagus nerve, radiation intensity, radiation dose, sympathetic nervous system, parasympathetic nervous system

ABSTRACT: To study changes in arterial pressure after irradiation and the role of the sympathetic and parasympathetic part of the vegetative nervous system in these changes, groups of rabbits were exposed to single total X-irradiation (RUM-3) in doses of 600 r or 1800 r at different intensities (20 r/min and 6.6 r/min for 600 r and 60 r/min for 1800 r). Arterial pressure changes after irradiation were investigated under the following conditions: administration of dibenamine, constriction of the free carotid artery, stimulation of the peripheral segment of the vagus nerve, and neurotomy of the vagus

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I 18082-63  
ACCESSION NR: AP3005689

nerve. Arterial pressure increases 20 min after irradiation in animals exposed to 600 r and 30 min after for animals exposed to 1800 r. For animals exposed to a 600 r dose for 100 min arterial pressure decreases in proportion to the radiation dose. Phase changes in arterial pressure at early periods after irradiation depend on the functional disturbances of the regulatory mechanisms. Increased arterial pressure is related to the reaction of the sympathetic region; and, decreased arterial pressure is related to the preponderant influence of the parasympathetic region of the vegetative nervous system. The nature and extent of arterial pressure changes depend on the time elapsed after irradiation, radiation dose, and radiation intensity. Orig. art. has: 4 figs, 1 table.

ASSOCIATION: Laboratoriya patofiziologii  
Tsentral'nogo nauchno-issledovatel'skogo instituta  
meditsinskoy radiologii Ministerstva  
zdravookhraneniya SSSR (Pathophysiological Laboratory - V. F. Cherkasov,  
Supervisor - Central Scientific-Research Institute of Medical  
Radiobiology - Ye. I. Vorob'yev, Director - Ministry of Health  
SSSR)

Card 2/3

LANIN, A.N.

Characteristics of the reaction of irradiated animals to some  
functional loads. Radiobiologija 4 no.5:701-702 '64.  
(MIRA 18:4)

l. TSentral'nyy nauchno-issledovatel'skiy institut meditsinskoy  
radiobiologii , Leningrad.

LANIN, A.N. (Lipetsk)

X-ray diagnosis of lipomas of the breast. Vop. onk. 11 no.4:99-100  
'65. (MIRA 18:8)

LANIN, A.N.

Prolapse of gastric polyps into the duodenum. Vest. rent. i  
red. 40 no.1565 Ja-F '65. (MIRA 1856)

1. Rentgenovskiy kabinet (zav. A N. Lanin) Lipetskogo  
oblastnogo onkologicheskogo dispansera.

*2/7/1984 17:15*  
BESPALOV, K.I., kand. tekhn. nauk; LANIN, A.S.

Automatic devices for checking the hardness of fuel atomizer  
needles. Avt. prom. no. 1:35-37 Ja '58. (MIRA 11:2)

1. L'vovskiy politekhnicheskiy institut.  
(Electronic instruments)

SOV/123-59-15-59764

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 123 (USSR)

AUTHORS: Rabinovich, A.N., Lanin, A.S.

TITLE: Devices for the Quality Check of Heat Treatment of Machine Parts for the Fuel Equipment of Tractors

PERIODICAL: Nauchn. zap. L'vovsk. politekhn. in-t, 1958, Nr 45, pp 264 - 268

ABSTRACT: The L'vov Polytechnical Institute has designed a number of devices for the checking of the hardness and the depth of the cemented layer of machine parts for the fuel equipment for the use by the Khar'kov Tractor Plant. The devices KT-3 and KT-4 are used for the grading of plungers and plunger bushings of the fuel pump, according to their degree of hardness. The device KT-3 is used for the grading of piston pins according to the depth of the cemented layer by comparing the magnetic permeability of the machine part with that of the gaging instrument. The pick-up consists of two transformers for one-limit devices and of three transformers for two-limit

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SOV/123-59-15-59764  
Devices for the Quality Check of Heat Treatment of Machine Parts for the Fuel Equipment of Tractors

devices and of three transformers for two-limit devices. The cores of the transformers are the machine part to be checked and the gaging instrument, while the secondary winding is switched by the bridge circuit. The devices have undergone production tests and were put into operation. 4 figures.

S.A.G.

Card 2/2

VEYTSMAN, L.N.; LANIN, F.I.; LEVIN, N.M.; KOLGANOV, O.A.

Productivity of guinea hens kept in cages. Trudy Inst.gen.  
no.20:249-256 '53. (MLRA 7:1)  
(Guinea fowl)

YEROKHIN, Viktor Mikhaylovich, inzh.; LANIN, Gennadiy Izrailevich,  
inzh.; KOSITSYNA, K.N., inzh., red.

[D-521 bulldozer with hydraulic control; the Bryansk  
Plant for Road Machinery and Building Equipment] Buldo-  
zer D-521 s gidravlicheskim upravleniem; Bryanskii za-  
vod dorozhnykh i stroitel'nykh mashin. Moskva, Srovi-  
zdat, 1964. 21 p. (MIRA 18:5)

1. Nachal'nik konstruktorskogo otdela navesnogo clorudo-  
vaniya Bryanskogo zavoda dorozhnykh i stroitel'nykh mashin.  
(for Yerokhin). 2. Bryanskii zavod dorozhnykh i stroitel'-  
nykh mashin (for Lanin).

LANIN, I.L.; PASHKOVA, A.G.

Improving the quality of vegetable tanning extracts by the  
fermentation methods. Kozh.-obuv. prom. no.11:13-16 N '59.  
(MIRA 13:3)

(Tanning materials)

LANIN, I.L., inzh.

Use of sodium tripophosphates in the extraction of tanning materials.  
Kozh.-obuv.prom. 5 no.4:24 Ap '63. (MIRA 16:5)  
(Tanning materials) (Sodium tripophosphates)

10.6121  
26.3130

85613  
S/147/60/000/004/005/016  
E191/E281

AUTHORS: Frankl', F. I. and Lanin, I. N.

TITLE: A Theoretical Example of a Subsonic Flow Past a Profile with a Local Supersonic Region Finishing with a Straight Compression Shock

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1960, No. 4, pp. 40-50

TEXT: Referring to F. I. Frankl', (Ref. 1: "Subsonic Flow Past Profiles with a Supersonic Region Finishing with a Straight Compression Shock", PMM, 1956, Vol. 21, No. 1) a boundary value problem for the Tricomi equation was formulated in order to construct an example of subsonic flow past a profile with a supersonic region finishing with a straight compression shock. With certain limitations upon the velocity pattern, the problem had been solved by Yu. V. Devingtal', (Ref. 2: "On the Existence and Uniqueness of the Solution of a Problem Set by F. I. Frankl'", Izvestiya VUZ, Matematika, No. 2, 1958). This solution does not yield an assurance that an example of a flow so defined has in fact been found. In the vicinity of one of the profile edges, the ✓

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S/147/60/000/004/005/016  
E191/E281

A. Theoretical Example of a Subsonic Flow Past a Profile with a Local Supersonic Region Finishing with a Straight Compression Shock

X

solution, in the first approximation, is transformed into a particular solution of the Tricomi equation found earlier by the present authors (Ref. 3: "The Example of a Near-Sonic Gas Flow with a Supersonic Region Bounded Downstream by a Compression Shock Finishing Inside the Flow", PMM, Vol. 19, No. 4, 1955) so that a local region appears with a treble valued relationship between the velocity factor and the co-ordinates. The analysis of this condition which is apparently inevitable when a straight shock is assumed and which possibly cannot be eliminated at all without the admission of flows which are not rigorously steady state has been given by I. Biybosunov, (Ref. 4: "Contribution to the Elimination of Local Trivalence of the Velocity Field in Near-Sonic Flow with a Stream Function", Uchenyye zapiski KBGU, Issue 3, 1959). It was shown that the trivalence can be eliminated by introducing an additional line of discontinuity across which the shock conditions are satisfied with a small error. For this reason, it is possible

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S/147/60/000/004/005/016  
E191/E281

A Theoretical Example of a Subsonic Flow Past a Profile with a Local Supersonic Region Finishing with a Straight Compression Shock

to accept the blemish in the formulation of the boundary value problem. Certain other qualities of the desired example are discussed. In particular, the profile curve should have no loops. It is not yet certain whether all the requirements can be met. The example is constructed in an explicit form without solving boundary value problems. The construction is the sum of several particular solutions of the Tricomi equation. In doing so, a numerical example is followed and the properties of the gas are assumed to be those described by Tricomi and Fal'kovich (Ref. 5: "On a Certain Class of Laval Nozzles", PMM, Vol. 11, 1947). There are 5 figures, 1 table and 7 Soviet references. X

ASSOCIATION: Kafedra teoreticheskoy fiziki, Kabardino-balkarskiy universitet  
(Department of Theoretical Physics, Kabardino-

Balkar University)

SUBMITTED: May 24, 1960  
Card 3/3

LANIN, I.N.

S/003/60/000/009/001/001  
B019/B054

AUTHOR: Frankl', F. I., Doctor of Physical and Mathematical Sciences, Professor

TITLE: Discussion of Problems of Hydroaerodynamics and Mathematical Physics

PERIODICAL: Vestnik vysshey shkoly, 1960, No. 9, pp. 47-48

TEXT: A Conference on Hydroaerodynamics and Mathematical Physics was held at Nal'chik in May 1960 on the initiative of the fiziko-matematicheskiy fakul'tet Kabardino-Balkarskogo universiteta (Department of Physics and Mathematics of the Kabardino-Balkarian University). Fourteen reports were delivered at the Conference by delegates of five higher institutes of learning and scientific institutes of the Northern Caucasus, as well as of three higher institutes of learning from other oblast' and Republics. The reports by Professor F. I. Frankl' and Senior Teacher I. N. Lanin (Kabardino-Balkarian University) on "The Flow Around Profiles With a Local Supersonic Zone Ending in a Compression

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Discussion of Problems of Hydroaerodynamics  
and Mathematical Physics

S/003/60/000/009/001/001  
B019/B054

"Shock", by Professor S. V. Fal'kovich of Saratovskiy universitet (Saratov University) on "The Integrals of the Chaplygin Equation With Singular Points on the Parabolic Line", and Senior Teacher E. Kerimgaziyev of Kirgizskiy universitet (Kirgiz University) on "The Application of the Straight-line Method to Certain Boundary-value Problems in the Theory of Transsonic Currents" dealt with the theory of transsonic currents. Problems of theoretical meteorology were dealt with in the report by L. N. Gutman, Doctor of Physical and Mathematical Sciences, of the Kabardino-Balkarskoye otdeleniye Instituta prikladnoy geofiziki AN SSSR (Kabardino-Balkarian Branch of the Institute of Applied Geophysics of the AS USSR) ("On the Theory of Fronts"). Docent B. Ya. Slobodov of the Stavropol'skiy sel'skokhozyaystvennyy institut (Stavropol' Agricultural Institute) dealt with "Some Problems of Hydrodynamics Within the General Theory of Atmospheric Circulations". Mal'bakhov, Student of the Kabardino-Balkarian University, held a report on "The Vertical Structure of Monsoons". M. Zhekamukhov and N. Arkabayev, Post-graduate Students of the Kabardino-Balkarian University, offered "Examples of the Rotation of Cosmic Gas Masses" and "The Model of a Star

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Discussion of Problems of Hydroaerodynamics  
and Mathematical Physics

S/003/60/000/009/001/001  
B019/B054

as Steady Radial Flow of Gas Particles and Photon Gas". A. Abdyldayev, Post-graduate Student of the Kabardino-Balkarian University, in his report dealt with "Some Problems of the Plane-parallel Flow of Heavy Liquids in Channels". Senior Teacher V. I. Men'shikova of the Stavropol'skiy pedagogicheskiy institut (Stavropol' Pedagogical Institute) delivered a report on "Semi-inverse Methods in the Theory of Motion of Ground Water with a Free Surface". Problems of mathematical physics were dealt with in three reports by Senior Teacher I. M. Karasev of the Kabardino-Balkarian University, Docent F. G. Baranovskiy of the Severoosetinskij pedagogicheskiy institut (North Ossetian Pedagogical Institute), and Docent Ye. I. Nesis of the Stavropol' Pedagogical Institute. Docent V. N. Karp of the Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute) dealt with the theory of oscillations. Special attention was paid to a report by Professor S. F. Fal'kovich who suggested a greatly improved method of calculating transsonic currents, to a report by Professor L. N. Gutman who suggested an interesting solution to one of the most important problems of local meteorological phenomena, and to a report by N. Arkabayev who gave an ingenious explanation of an important astrophysical

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Discussion of Problems of Hydroaerodynamics  
and Mathematical Physics

phenomenon.

S/003/60/000/009/001/001  
B019/B054

ASSOCIATION: Kabardino-Balkarskiy gosudarstvennyy universitet  
(Kabardino-Balkarian State University)

Card 4/4

LANIN, I. N.

Cand Phys-Math Sci - (diss) "Study of the streamlining of profiles of a pre-sonic stream having local ultra-sonic region terminated by a jump in density." Saratov, 1961. 8 pp; (Saratov State Univ imeni N. G. Chernyshevskiy); 200 copies; price not given; (KL, 5-61 sup, 173)

28825

10.11.20

S/147/61/000/003/016/017  
E031/E335AUTHOR: Lanin, I.N.TITLE: The approximate construction of the subsonic flow  
round a given profile with a local supersonic region  
ending in a density discontinuityPERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Aviatsionnaya tekhnika, no. 3, 1961, pp. 155 - 162TEXT: This paper gives an example of the calculation of the  
flow round an arbitrary given profile which is similar to that  
constructed earlier in the work of F.I. Frankl' and the author  
(Ref. 1 - this journal, no. 4, 1960). The problem is solved  
by using the transformation of the stream function given by:

$$\delta\omega = \omega - \omega^0 ,$$

$$\omega^0 = \Psi^0 - \frac{\rho}{\rho_0} (uy^0 - vx^0), \quad \omega = \Psi - \frac{\rho}{\rho_0} (uy - ux) \quad (2)$$

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28825

S/147/61/000/003/016/017

The approximate construction .... E031/E335

where:  $x^o$ ,  $y^o$ ,  $x$ ,  $y$  are the Cartesian coordinates in the physical plane as functions of the hodograph variables  $\Theta$  and  $\eta$ ;  
u and v the components of the velocity vector,  
 $\rho$  the density, and  
 $\rho_o$  the density in the stagnation point.

In the hodograph plane the following condition must be satisfied:

$$\delta\omega(0, \eta) = \delta\omega(0, -\eta) \quad (4).$$

Frankl' polynomials are taken as particular solutions of Eq. (4). Expressions are derived for  $\delta\Theta$  and  $\delta\eta$ . Frankl' (Ref. 2 - PMM, v. 23, no. 4, 1959) has shown that the jump in density is not straight for this example. Differential equations are constructed for  $\Theta_1$  and  $\Theta_2$  (the suffixes correspond to the leading and trailing sides of the jump) and

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The approximate construction ....

28825  
S/147/61/000/003/016/017  
E031/E335

solved by expansion in power series of  $\eta$ .  
There are 4 figures, 4 tables and 5 Soviet references.

ASSOCIATION: Kafedra vysshey matematiki, Kabardino-  
balkarskiy universitet (Department of Higher  
Mathematics, Kabardino-Balkar University)

SUBMITTED: February 9, 1961

X  
Card 3/3

S/124/62/000/005/010/048  
D251/D308

AUTHOR: Lanin, I.N.

TITLE: An approximate construction of the shear flow around a given profile of a subsonic current with local supersonic regions, discharged by curved discontinuities of compression

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 5, 1962, 24,  
abstract 5B116 (Uch. zap. Kabardino-Balkarsk. un-t.,  
1961, no. 13, 59 - 61)

TEXT: The solution is obtained by the direct case of shear flow around a profile which is close to the profile constructed earlier by means of the solution of the reverse case (F.I. Frankl', I.N. Lanin, Izv. vyssh. uchebn. zavedeniy. Aviats. tekhn., 1960, no. 4, 40 - 50, RZhMekh, 1961, 8B146). The solution is in the form of combinations of hyper-geometric functions, comprising five arbitrary parameters which are determined from the boundary conditions by means of the method of least squares. The distribution of velocities on the new profile is calculated. [Abstractor's note: Complete translation].

Card 1/1

39771  
S/147/62/000/002/005/020  
E031/E435

214360

AUTHOR: Lanin, I.N.

TITLE: The circulatory flow round a profile of a subsonic flow with a local supersonic zone ending in a density discontinuity

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy.  
Aviatsionnaya tekhnika, no.2, 1962, 32-38

TEXT: F. I. Frankl' (PMM, v.20, no.2, 1956) formulated the following boundary value problem for the Tricomi equation

$$\eta \frac{\partial^2 \psi}{\partial \theta^2} + \frac{\partial^2 \psi}{\partial \eta^2} = 0 \quad (1)$$

find the solution for the following boundary conditions:  
A. for  $s = s_\infty$ ,  $\theta = \theta_\infty$ , the solution must have a singularity of the form

Card 1/6

3

S/147/62/000/002/005/020  
E031/E435

The circulatory flow ...

$$\begin{aligned}\bar{\psi} &= \alpha \bar{\psi}_2 + \beta \bar{\psi}_1 = \alpha \frac{\cos t}{\rho} + \beta \ln \rho + 0_{(1)}, \\ 0 - \theta_\infty &= \rho \sin t, \quad s - s_\infty = \rho \cos t, \\ s &= \frac{2}{3} \eta^{3/2}, \quad \alpha = - \frac{\Gamma}{2\pi} \cdot \frac{s_\infty}{\sigma_0}, \\ \beta &= - \frac{\Gamma}{2\pi C \left( \frac{3}{2} s_\infty \right)^{1/2}}, \\ C &= (x+1)^{1/3} \left( \frac{x+1}{2} \right)^{\frac{1}{x-1}}.\end{aligned}\tag{2}$$

where  $\Gamma$  is the circulation;  $\sigma_\infty, \sigma_0$  are the density of the gas at infinity and at the stagnation point respectively;  $\theta$  is the angle of inclination of the velocity vector;  $\eta$  is a function of the modulus of the velocity and  $\psi$  is the stream function;

B.  $\psi = 0$  on  $BC^m ECD_\infty EFH$ ; C.  $\frac{\partial \psi}{\partial \theta} = 0$  on  $BAH$ ;

Card 2/4 on BAH;

The circulatory flow ...

S/147/62/000/002/005/020  
E031/E435

D.  $\psi(0, \eta) = \psi(0, -\eta)$ ,  $0 \leq \eta \leq \eta_B$

Without solving Frankl's problem, the author finds a solution of the Tricomi equation with singularity 2A and then constructs a profile on which the boundary conditions 2C and 2D are satisfied. A flow is constructed in which 2D is satisfied approximately. Solutions corresponding to a dipole and a point vortex are combined linearly. This solution has a singularity at  $(\theta_\infty, s_\infty)$ . Condition 2C is satisfied by adding a solution with a singularity at  $(-\theta_\infty, s_\infty)$ . The condition 2D is satisfied approximately by modifying the solution for the vortex and adding the corresponding stream function. There is 1 figure.

ASSOCIATION: Kabardino-Balkarskiy gosudarstvenny universitet  
Kafedra differential'nykh uravneniy i vysshey  
matematiki (Kabardino-Balkar State University,  
Department of Differential Equations and Higher  
Mathematics)

SUBMITTED: December 15, 1961

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LANIN, I.N.

Cauchy problem for an equation with initial data along the line  
of parabolic degeneration. Uch. zap. Kab.-Bal. gos. un.  
no.17:9-11 '63. (MIRA 17:1)

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928520017-7

KARASEV, I.M.; LANIN, I.N.

A class of polynomials. Uch. zap. Kab.-Bal. gos. un. no.17:25 '63.  
(MIRA 17:1)

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928520017-7"

L 00588-66 EWT(1)/EWP(m)/EWA(d)/FO5(k)/EWA(1)

ACCESSION NR. AR5014700

UR/0124/65/000/005/B045/B045

39 B

SOURCE: Ref. zh. Mekhanika, Abs. 5B256

AUTHOR: Lanin, I. N.

TITLE: Solution of the F. I. Frankl problem describing a subsonic flow around a symmetric tetragonal profile in infinity

CITED SOURCE: Uch. zap. Kabardino-Balkarsk. un-t. Ser. fiz.-matem. n., vyp. 19, 1963, 455-468

TOPIC TAGS: symmetric subsonic flow, subsonic flow, approximate solution, fastest descent method, net point method / Trikomi equation, Frankl boundary problem

TRANSLATION: The report discusses a symmetric subsonic flow around a symmetric tetragonal profile. The flow is characterized by a localized supersonic zone terminating in a distorted shock wave. The mathematical formulation of the corresponding boundary problem for the Trikomi equation was presented by F. I. Frankl. The author of this report presents an approximated method of solving that problem. The basic assumption is that an unknown curve, corresponding in the plane of a travel-time curve to a shock wave, differs little from a segment of the vertical. After subdivision of the unknown function into

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L 00588-66

ACCESSION NR: AR5014700

two items, one of which is small, the author obtains a simplified boundary problem for the Trikomi equation. The fastest descent method is used to obtain a solution in the elliptical half-plane. Correct selection of the zero approximation limits operations to four approximations. The net-point method is used in the hyperbolic half-plane. Both solutions are then "superposed" along the line of parabolicity, since it proves that values of the unknown function along that line differ only by a fourth decimal place irrespective of approach from the region of ellipticity or hyperbolicity. A flow diagram in a physical plane is plotted on the basis of the solution evolved. I. A. Blyunikina

SUB CODE: ME

ENCL: 00

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Card 2/2

L 36003-66 EWT(d) IJP(c)  
ACC NR: AR6004025

SOURCE CODE: UR/0044/65/000/009/B051/B051  
*24*  
*B*

AUTHORS: Lenin, I. N.; Kardanov, Kh. G.

TITLE: A boundary-value problem for an equation of the hyperbolic type

SOURCE: Ref. zh. Matematika, Abs. 9B242

REF SOURCE: Uch. zap. Kabardino-Balkarsk. un-t. Ser. fiz.-mat., vyp. 22, 1964,  
113-116

TOPIC TAGS: boundary value problem, hyperbolic equation, differential equation  
solution

ABSTRACT: The following problem is solved: Find the solution  $z(x,y)$  of the equation  
 $y z_{xx} + z_{yy} + \alpha y^{-1} z_y = 0$  ( $\alpha > -1/2$ ),

which is regular in the curvilinear triangle ABC and satisfies the conditions: 1 -  
on the segment  
of the x axis

$$\lim_{y \rightarrow -0} (-y)^{-\alpha} z_y(x, y) = v(x);$$

2 - on the characteristic curve AC  $z(x, y)|_{AC} = \varphi(x)$ ,  $0 < x < 1/2$ ,

where  $\varphi(x)$  is a regular function. *(Translation of abstract)*

SUB CODE: 12

Card 1/1 *lll*

UDC: 517.946

LANIN, I. S.

57/49T41

USSR/Engineering

Nov 48

Heating  
Fuel Conservation

"Quantitative Regulation in the Leningrad Heating System," I. S. Lanin, Engr, 2 2/3 pp

"Za Ekon Top" No 11

Accomplished regulation of the amount of water used in the Second and Third Leningrad Systems by changing the number of pumps or combining pumps of equal capacity. Used water-cooled rheostats to regulate number of revolutions in pumps. This method increased earning capacity and fuel economy of heating systems.

57/49T41

P

F

1691. QUANTITATIVE AND QUALITATIVE REGULATION IN HEATING NETWORKS  
OF LENINGRAD. Linnip, I.S. (Za Eksp. Topliva (Fuel Econ.), Oct. 1951.  
18-28). An extensive account is given of the development of regulation  
for district heating systems in Leningrad. (L).

LANIN, I.S.; KHARITON, M.I.; GROMOV, N.K., redaktor.

[Control of corrosion in heating networks] Opyt bor'by s korroziei v teplo-vykh setiakh. Pod red. N.K.Gromova. Moskva, Gos.energ.izd-vo, 1953. 51 p.  
(MIRA 6:10)

(Corrosion and anticoatings) (Heating from central stations)

LANIN, I. S.

Fuel Abstracts.

May 1954

Domestic Heating,  
Cooking, Lighting

(D)

✓ 4014. TWO-STAGES TEMPERATURE REGULATOR FOR HOT WATER SUPPLY.  
Ivanin, I.S. (Energetik (Pvt Ener, Moscow), Nov. 1953, 17-19). A  
description and diagram are given of a mixing device which supplies hot water  
at constant temperature from a hot water heating circuit and a cold supply,  
in spite of variations in the temperatures and pressures of the water entering  
the device. (L).

LANIN, I. S.

LANIN, I. S. — "Study of Operation Conditions of the Quantitative-Qualitative Regulation of Thermal Energy Release in Heating Systems." (Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min Higher Education USSR, Leningrad Order of Labor Red Banner Construction Engineering Inst, Leningrad, 1955.

SO: Knizhnaya Letopis' No. 31, 30 July 1955.

\* For the Degree of Candidate in Technical Sciences.

LAPIN, I. S.

I. S. Lapin and M. I. Khariton, Ovrt bor'by s korroziyey v teplovikh setyakh (Experience in Combating Corrosion in Thermal Networks), Gosenergoizdat.

The booklet describes various methods of anticorrosion protection of metal of the internal surfaces of pipes, which were applied in the operation of the Lenenergo thermal networks. Particular attention is devoted to the organization, and methods of making observations on the intensity of corrosion of metal in individual sections of the thermal network.

The booklet is intended for engineers, technicians, and stalinovite-workers in the field of district heating.

SO: Sovetskive knigi (Soviet Books), No. 100, 1953, Moscow, (U-6472)

LANIN, I.S., kandidat tekhnicheskikh nauk.

Effect of qualitative and quantitative control of heat release  
on the technical and economic indices of heating networks. Trudy  
LIEI no.12:85-101 1956. (MLRA 10:6)

1, Glavnnyy inzhner Teploseti Leningradskoy elektroenergeticheskoy  
sistemy. (Heating from central stations)

SOV/112-59-1-350

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 1, p 48 (USSR)

AUTHOR: Lanin, I. S.

TITLE: Operating Experience With Underground Heat Lines in the Lenenergo Heating System

PERIODICAL: Tr. Nauchno-tekh. soveshchaniya po proyektir. i str-vu teplovykh setey. M.-L., Gosenergoizdat, 1956, pp 181-210

ABSTRACT: The Lenenergo heating system has been in operation for over 11 years without a hitch. By 1955, the total piping length reached 138 km and the number of buildings served exceeded 1,600. Type 3-LGES tunnel having a shaped reinforced-concrete base and a 2-part concrete vault, type 2-LGES vaulted tunnel with a flat bottom, and a reinforced-concrete two-duct rectangular tunnel that gained the widest use are described. Foam-concrete and conduit structures with dug-peat and with peat-segment insulators are considered. The piping insulated with autoclave foam concrete predominates

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SOV/112-59-1-350

.Operating Experience With Underground Heat Lines in the Lenenergo Heating System (about 40 km) in the system; this structure was tested under actual operating conditions. Test data is reported which shows that monolithic-insulation conduits have no lesser compensation than the tunnels. Heat losses in such conduits amount to one-half of those in the existing heating system. Results of a structure opening revealed a good condition of all structural components. Information on borulin as a hydroinsulating and anticorrosion coating is supplied. Methods are described for restoring heat insulation in tunnels and conduit lines, as well as steps for improving the quality of underground heat-line operation.

M. L. Z.

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28(2)

SOV/91-59-8-9/28

**AUTHOR:** Lanin, I.S., Candidate of Technical Sciences**TITLE:** A Calorimeter**PERIODICAL:** Energetik, 1959, Nr 8, pp 14-15 (USSR)**ABSTRACT:** At the Tallinskiy zavod izmeritel'nykh priborov (Tallin Measuring Instrument Plant) the work on the improvement of the Yakimov calorimeter, which was begun in 1957, was completed. This calorimeter is used for measuring heat energy. It is equipped with a megacalorie counter, a water flow counter and a dial indicating the temperature difference between the outgoing hot water and the returning cold water within 20-100°C which corresponds to the measuring range of the instrument. A diagram of the calorimeter is shown in fig.1. The device is about 455 mm long and 140 mm high, without pipe unions. The instrument consists of two U-shaped tubes. Hot water is flowing thru the inner tube, while the returning cold water flows thru the outer tube. The unequal elongation of the tubes caused by the temperature difference is transmitted to the calorie counter by a lever system, shown in

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SOV/91-59-8-9/28

A Calorimeter

fig.2. This results in a displacement of the calorie counter in regard to a friction disc. This friction disc is driven by a sprocket of the flowmeter. The megacalorie counter in turn is driven by the friction disc thru a friction wheel. The number of rotations of the friction wheel depends on its position in regard to the disc. The instrument has a maximum error of  $\pm 4\%$ , but may be produced for a higher accuracy (for example,  $\pm 2.5\%$ ). It is designed for a hot water temperature of  $30-150^{\circ}\text{C}$  and a return water temperature of  $30-70^{\circ}\text{C}$ . The calorimeter is mounted on the water return pipeline and is connected by hoses to the hot water line, as shown in fig.3. There are 3 diagrams.

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8(6)

SOV/91-59-9-2/33

AUTHOR: Lanin, I.S., Candidate of Technical Sciences

TITLE: Some Results of the Leningrad District Heating System

PERIODICAL: Energetik, 1959, Nr 9, pp 3-6 (USSR)

ABSTRACT: The Leningrad district heating system, operated by Lenenergo, was considerably expanded after WW II. A great number of plants, office and apartment buildings were connected to the district heating system. The methods of controlling the heat supply, the technique of installing heating mains and the organization of the operation of the heating system were improved. The quantitative-qualitative heat control system was introduced for regulating temperature and quantity of water fed to the heating mains, according to the outside air temperature. The parameters of the heat distribution control graphs were selected by taking into consideration the presence of reserves in installed heater surfaces of the district heating system. Instead of graph 95/70°C, graph 86/66°C was used in

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SOV/CZ-59-9-2/33

Some Results of the Leningrad District Heating System

local systems with an increased water circulation, exceeding the nominal value by 25% at an outside air temperature of  $-23^{\circ}\text{C}$ . The operational graph of the quantitative-qualitative heat is shown in Figure 1. The heat discharge is controlled by changing the water pressure in the feed and return mains at the TETs according to instructions by the operator in the control room of the district heating system. Under operational conditions, the heat discharge is controlled according to the outside air temperature by five-stage graphs, shown in Figure 2. The introduction of the quantitative-qualitative heat control led to a reduction of the electric power required for pumping the water thru the mains during the heating season from 13-14 kwh to 8 kwh per megakilokalorie. Hot water for domestic use is taken directly from the hot water mains during warm days of the heating season when the load on the heating system is reduced to

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SCV/S2-59-9-2/33

### Some Results of the Leningrad District Heating System

65%. During colder days, hot water is taken from the return mains, whereby some of their load is removed. In connection with the further development of the Leningrad district heating system, and especially the hot water supply, it is planned to install VT-50 and VPT-50 turbines, operating on steam of 130 atmospheres and 565°C. The boilers supplying these turbines will produce 420 tons of steam per hour at 140 atmospheres and 570°C. Boilers for water heating will be installed for covering the demand during the peak load hours. The development of the hot water supply will increase the number of operation hours of the district heating system from 2500-3000 to 5000-6000 hours. This will result in a considerable fuel saving because of the combined production of thermal and electrical energy. An annual saving of 800,000 tons of fuel is expected for 1965. For reducing the load peaks of the hot water supply, daily load control graphs will be established and the hot water storage tanks of the different TETs

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SOV/91-59-9-2/33

Some Results of the Leningrad District Heating System

will be enlarged. By levelling the load graphs of the hot water supply, the VT-25 turbines at some TETs may produce more electric power. Distributing heat to municipal buildings and industrial installations increased the utilization of the district heating system and reduced the costs for heating and electric power. The combination of the hot water supply with the method of quantitative-qualitative control of thermal energy improved the passing capacity of new district heating system branches by 400 megakilokalories per hour without additional spending of funds. The costs for building new heating pipelines were reduced by 20-25% by laying the insulated tubes directly into the ground without building additional channels. Since 1949, more than 100 km of heating mains were installed, which worked without failure sofar. In November 1957, a 6.5 km long section, consisting of tubes of 700 mm diameter, was completed.

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SOV/51-59-9-2/33

Some Results of the Leningrad District Heating System

The tubes for these mains were insulated by foam concrete. Engineering and economical calculations show the practicability of abandoning the thermal insulation of the return mains and using reliable anticorrosion coatings instead. The Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry of the AS USSR), in cooperation with ORGRES, performed research work for finding effective protective coatings for such pipelines. The protective coatings may directly be applied on the surface of steel tubes. In combination with other protective measures (drainage, protection from surface water, etc.), the wall thickness of the tubes may be reduced, since an additional reserve in thickness is no longer required. Thereby, about 10-15% of the weight of tubes may be saved. It is planned to conduct research on more effective insulation methods for mains located in wet terrain: protective metal shells covering the insulation and the anticorrosion coating; cellular ceramics having closed

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Some Results of the Leningrad District Heating System

pores; loose hydrophobic insulation materials. Finally, a number of organizational measures were taken for reducing the number of service personnel. Mechanical aids, workshop trucks, motorcycles, automation, remote signalization were used for increasing the efficiency of the maintenance personnel. Introducing the compensators with rubber cups, developed by Candidate of Technical Sciences A.A. Skvortsov at VTI, which do not require any maintenance, will increase the reliability of the district heating system. The method of washing pipelines by hydraulic-pneumatic means will be used on a large scale; it was developed in cooperation with the Institut zheleznodorozhnogo transporta (Institute of RR Transportation.) There are 2 graphs.

Card 6/6

IANIN, I.S., kand.tekhn.nauk

Plenum of the Central Heating Section of the Scientific and Technical Society of the Power Engineering Industry. Teploenergetika 9 no.8:  
95-96 Ag '62. (MIRA 15:7)  
(Heating from central stations—Congresses)

GORSHKOV, A.S., kand. tekhn. nauk; LANIN, I.S., kand. tekhn. nauk;  
SOKOLOV, Ye.Ya., doktor tekhn. nauk, prof.

Development of heating from central stations in the U.S.S.R.  
Teploenergetika 10 no.12:74-77 D '63. (MIRA 17:8)

1. Vsesoyuznyy ordena Trudovogo Krasnogo Znameni teplotekhnicheskiy institut imeni Dzerzhinskogo, Severo-zapadnyy politekhnicheskiy institut i Moskovskiy energeticheskiy institut.

LANIN, I.S., kand. tekhn. nauk

Study and consideration of thermal conditions in the parallel operation of No.14 and No.15 thermal electric power plants of the Leningrad Electric Power System. Teploenergetika 11 no.7: 49-54 Jl '64. (MIRA 17:8)

1. Severo-zapadnyy politekhnicheskiy institut.

LANIN, I.S., kand. tekhn. nauk

Forty years of centralized heating in Leningrad. Teploenergetika  
11 no.11:12-16 N '64.

(MERA 17-12)

1. Severo-zapadnyy politekhnicheskiy institut.

LANIN, I.S., kand. tekhn. nauk

Plenum of the central section on central heating of the Scientific  
and Technical Society of the Power Industry. Teploenergetika 12  
no.7:93-94 Jl '65.  
(MIRA 18:7)

LANIN, L.V.

Lubricant for dies. V. K. Bocharnikov, V. P. Volkov,  
L. V. Lanin, V. D. Utkin, N. P. Kuchumov, M. N. Kyutina,  
and L. P. Tsvetkovskaia. U.S.S.R. 104,830. Feb. 25, 1957.  
A mixt. of 25-30% Al stearate and 70-5% aviation oil is  
used to lubricate holding dies for org. glass substitutes.  
It prevents marring of the molded article, reduces internal  
strains, and permits replacement of chamois with textiles  
for covering the dies. M. Hough

8

JHD amj

*LANIN, M. I.*

137-58-4-8592

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4 p 324 (USSR)

AUTHOR: Lanin, M. I.

TITLE: Nucleonic Measurement of the Thickness of Rolled Steel and of Tin Coating (Izmereniye tolshchiny stal'nogo prokata i tolshchiny olovyanogo pokrytiya pri pomoshchi radioaktivnogo izlucheniya)

PERIODICAL: V sb.: Primeneniye radioaktivn. izotopov v chernoy metalurgii. Chelyabinsk, Knigoizdat, 1957, pp 190-201

ABSTRACT:  $Tl^{204}$ ,  $Sr^{89}$ ,  $Sr^{90+Y^{90}}$ , and  $Ce^{114+Pr^{114}}$  may be employed as sources of  $\beta$  radiation to measure the thickness of steels of up to 150, 600, 800, and 1000 microns respectively.  $\gamma$ -radiating isotopes may be employed to measure greater thicknesses of steel:  $Ir^{192}$  to 40 mm,  $Cs^{134}$  to 50, and  $Co^{60}$  to 60 mm at a mean radiant energy of 0.5, 0.7, and 1.25 Mev respectively. Employment of these isotopes facilitates inspection of hot and cold rolled steel over a wide range of thicknesses, except for thicknesses from 1 to 3 mm. The problem of evaluating the precision of thickness measurement by absorption and reflection are examined. Instruments for measuring the thickness of rolled steel

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137-58-4-8592

Nucleonic Measurement of the Thickness (cont.)

and Sn coatings are based on the compensation (null) method of measurement, combining the advantages of the method of comparison with that of absolute measurement. The principle of operation of the instrument consists of measuring the stream of radiation passing through the material against a compensating flux, the magnitude of which changes as a separating shield is introduced. The position of the shield at the instant when the fluxes are equal serves as a measure of the thickness of the material being inspected. A block diagram of the instrument is appended, and its design is described. It is stated that three models of the instrument have been developed thus far, one to measure thickness in the 5 to 150 micron range, one for the 30 to 1000 micron range, and one for the 2 to 10 micron range. The maximum error is 1.5-3% of the value measured. The instruments are capable of being connected to automatic recording devices or to systems for the automatic control of the rolling mill screwdown.

V. G.

1. Steel--Thickness--Measurement
2. Tin coatings--Thickness--Measurement
3. Steel--Processing--Quality control
4. Isotopes (Radioactive)--Applications

Card 2/2

LANIN, M.I.

Problem concerning the design of complex devices for the transmission  
of information with centralized control. Sbor. rab. po vop.  
elektromekh. no.5:209-215 '61. (MIRA 14:6)  
(Information theory)

16.8000 (1031,1132,1329)

35436  
S/103/62/023/003/005/016  
D201/D301

AUTHOR: Lanin, M.I. (Leningrad)

TITLE: Calculating the probability of information loss in centralized control systems

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 3, 1962,  
321 - 330

TEXT: The author considers the use of mass service theory methods in analyzing centralized control of production processes, namely for determining one of the indices of performance of information transmission service - the probability of loss of information. Centralized information collection systems only are considered; collecting information centrally, the information being transmitted intermittently by sources with a finite number of differing states; every one of common unit-type arrangements for receiving and processing information at the central office can be reached by every one of the territorially spaced information sources. A mass service system is thus considered with a limited number of waiting calls, ✓

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Calculating the probability of ...

S/103/62/023/003/005/016  
D201/D301

the duration of information transmission being constant. The input flow is assumed to be the simplest possible with a parameter  $\lambda$  - the average number of calls per unit time and a constant service time  $\tau$ . The number of places in the queue is taken as  $n$ . The problem is solved by the method of Markov chains. This method is used, in particular, for determining the above mentioned performance index in the following system: A single-channel system with common memory; a multi-channel system with common memory; a system with divided memory. The above method of determining structural information losses pertains only to single-step systems of transmission of information and may be found useful for analysis of structurally more complicated systems. There are 2 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: D.G. Kendall, Some Problems in the theory of Queues. J. Roy. Statist. Soc., v. 13, no. 13, 1951.

SUBMITTED: July 17, 1961

Card 2/2

LANIN, M.I.

Some operational indices of block-type remote control devices.  
Sbor.rab.po vop.elektromekh. no.7:270-277 '62. (MIRA 16:1)  
(Remote control) (Electronic data processing)

GOROKHOV, L.P.; LANIN, M.I.

Modeling of the structures of telecommunication systems. Sbor. rab. po  
vop. elektromekh. no.9:238-250 '63. (MIRA 17:2)

S/103/63/024/004/014/014  
D201/D308

AUTHORS: Lanin, M.I., Mandel'shtam, S.M. and Sidel'nikov,  
V.V. (Leningrad)

TITLE: Some problems of the mathematical foundation governing  
the selection of the number of quantization  
regions in analog-to-digital converters

PERIODICAL: Avtomatika i telemekhanika, v. 24, no. 4, 1963,  
573-578

TEXT: The authors consider the relationship between the amount of information and the magnitude of the quantization region for normal and even distribution of errors in analog-to-digital conversion and derive formulas which may be used as an objective basis for determining the number of quantization levels. The following simplifications are made in deriving the solution: it is assumed that the sections in front of the quantizer introduce random errors only; that there is no loss of information after the quantization and that no distinction is made between errors at the ends and at other points of the scale of the indicating instrument. Conclusions:  
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